

Amendment and Response

Serial No.: 09/821,669

Confirmation No.: 4980

Filed: 29 March 2001

For: METHOD FOR MAKING A STEM WEB

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Remarks

The Office Action mailed 6 January 2003 has been received and reviewed. Claim 33 has been canceled, claims 32 & 34 have been amended, and new claims 41-57 presented, leaving claims 11, 13-15 and 21-32, and 34-57 pending. Reconsideration and withdrawal of the rejections are respectfully requested.

Allowable Subject Matter

Applicants note that claims 29-31, 33-34, and 38-40 were indicated as allowable.

The recitations of allowable claim 33 have been incorporated into claim 32 and claim 34 has been revised to depend from amended claim 32. As a result, Applicants respectfully submit that amended independent claim 32 and all of its dependent claims 34-40 are also allowable as presented herein.

New Claims

New claim 41, depending from claim 11, is presented. Support for this claim can be found in the specification at, e.g., p. 9, lines 15-18.

New independent claim 42 and its respective dependent claims 43-49 are also presented. Support for new independent claim 42 can be found in the specification at, e.g., p. 7, line 22 to page 8, line 9.

New independent claim 50 and its respective dependent claims 51-57 are also presented. Support for new independent claim 50 can be found in the specification at, e.g., p. 7, line 22 to page 8, line 9 and p. 18, lines 11-14.

The 35 U.S.C. §102 Rejection

Claims 32 and 35-37 were rejected under 35 U.S.C. §102(b) as being anticipated by, or in the alternative, under 35 U.S.C. § 103(a) as obvious over Melbye et al. (U.S. Patent No. 5,077,870).

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Although Applicants traverse this rejection and the assertions presented in support thereof, the recitations of claim 33 (indicated as allowable) have been added to claim 32, thereby rendering this rejection moot. Applicants do, however, expressly reserve the right to traverse this rejection and the assertions made in support of it at a later date.

In view of the above, withdrawal of this rejection is respectfully requested.

The 35 U.S.C. §103 Rejection

Claims 11, 13-15 and 21-28 were rejected under 35 U.S.C. §103(a) as being unpatentable over Zimmerman (U.S. Patent No. 2,731,671) in view of Püschner et al. (U.S. Patent No. 2,297,245).

In the previous response, Applicants noted that Zimmerman does not disclose or suggest the formation of "a plurality of stems" in each of "a plurality of discrete polymeric regions" on a web. Rather, each mass of polymer deposited in the processes disclosed by Zimmerman forms a single element of a fastener (i.e., a "zipper").

Püschner et al. has been cited in an attempt to remedy the deficiencies of Zimmerman. Applicants respectfully submit, however, that Püschner et al. suffers from the same deficiencies. Namely, Püschner et al. does not disclose or suggest "forming a plurality of stems in each discrete polymeric region."

Applicants note that the Office Action does not identify the formation of any structures in Püschner et al. that would correspond to the formation of a plurality of stems as recited in independent claim 11 and respectfully submit that Püschner et al. simply does not disclose or suggest forming a plurality of stems within the plain meaning and broadest reasonable interpretation of that phrase as used in connection with the present invention.

At best, Püschner et al. discloses applying polymeric material in strips to a tape followed by removing portions of the polymeric material to form separate, but smaller strips. *See, e.g.,* Püschner et al., Figs. 2 & 3. At no time, however, is any such "discrete polymeric region" formed to include a plurality of stems as recited in claim 11.

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Applicants also submit that many of the assertions advanced in support of the rejection of various dependent claims are also not supported by the cited references.

For example, with respect to claims 13 and 14, Applicants submit that the recited passage of Zimmerman discloses injection molding. In contrast, claim 13 recites extrusion and claim 14 recites the use of cutting blades. None of these processes are disclosed or suggested by either Zimmerman or Püschner et al.

With respect to claims 23 and 24, the assertion that "the fabric (tapes) employed by the primary patentee are seen to be both fibrous and at least somewhat stretchable (and (therefore) elastic)" is not supported by either of the cited references. Furthermore, Applicants submit that even if a fabric is stretchable, it is not inherently elastic as asserted in the Office Action. If this assertion is maintained in a subsequent Office Action, Applicants respectfully request that a reference be cited in support thereof pursuant to MPEP § 2144.03.

With respect to claim 15, Applicants submit that, in addition to not disclosing the formation of stems as discussed above with respect to claim 11, neither Zimmerman or Püschner et al. teach or disclose "deformation of the stems with a heated surface to produce an enlarged end on the stems" as recited in claim 15. Applicants further note that no portion of either reference is cited in support of this rejection.

With respect to claim 28, Applicants submit that, in addition to not disclosing the formation of stems as discussed above with respect to claim 11, neither Zimmerman or Püschner et al. teach or disclose "hooks" as recited in claim 28. Applicants further note that no portion of either reference is cited in support of this rejection.

For the above reasons, Applicants respectfully submit that independent claim 11 and its dependent claims 13-15 and 21-28 are patentable over Zimmerman in view of Püschner et al.. Reconsideration and withdrawal of these rejections are, therefore, respectfully requested.

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Summary

It is respectfully submitted that the pending claims 11, 13-15, 21-32, and 34-57 are in condition for allowance and notification to that effect is respectfully requested. The Examiner is invited to contact Applicants' Representatives, at the below-listed telephone number, if it is believed that prosecution of this application may be assisted thereby.

Respectfully submitted for

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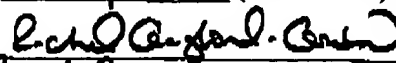
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CERTIFICATE UNDER 37 CFR §1.8:

The undersigned hereby certifies that this paper is being transmitted by facsimile in accordance with 37 CFR §1.6(d) to the Patent and Trademark Office, addressed to Assistant Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on this 6th day of May, 2003, at 3:05 p.m. (Central Time).

By:



Name:

Rachel Englund-Gebhardt

**APPENDIX A - SPECIFICATION/CLAIM AMENDMENTS
INCLUDING NOTATIONS TO INDICATE CHANGES MADE**

Serial No.: 09/821,669

Docket No.: 54407US007

Amendments to the following are indicated by underlining what has been added and bracketing what has been deleted. Additionally, all amendments have been marked in bold typeface.

In the Claims

For convenience, all pending claims are shown below.

11. A method of making a web material having a plurality of stems extending from discrete regions of the web, the method comprising:
- providing a web;
 - providing a plurality of discrete quantities of a polymeric material on the web at a temperature above its softening point, wherein a plurality of discrete polymeric regions are formed on the web; and
 - forming a plurality of stems in each discrete polymeric region of the plurality of discrete polymeric regions.
13. The method according to claim 11, wherein the discrete quantities of polymeric material are provided by extruding molten polymer in a form selected from intermittent quantities and continuous ribbons.
14. The method according to claim 11, wherein the discrete quantities of polymeric material are provided by one or more rotating cutting blades positioned intermediate a source of polymeric material and the web, wherein the cutting blades cut the polymeric material into discrete quantities.
15. The method according to claim 11, further comprising deformation of the stems with a heated surface to produce an enlarged end on the stems.

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21. The method of claim 11, wherein the plurality of discrete polymeric regions are located on only one major surface of the web.
22. The method of claim 11, wherein the plurality of discrete polymeric regions are separated by inter-regions revealing exposed portions of the first major surface of the web.
23. The method of claim 11, wherein the web comprises loop structures adapted to lock with the plurality of stems.
24. The method of claim 11, wherein the web comprises an elastic web.
25. The method of claim 11, wherein the plurality of discrete polymeric regions comprises a plurality of stripes extending over the first major side of the web.
26. The method of claim 11, wherein the plurality of discrete polymeric regions covers between 20 and 80 percent of the first major side of the web.
27. The method of claim 11, wherein the plurality of discrete polymeric regions covers between 5 and 25 percent of the first major side of the web.
28. The method of claim 11, wherein each stem of the plurality of stems comprises a hook.
29. The method of claim 11, wherein the web defines a localized plane, and wherein the plurality of stems are oriented at an angle that is not normal to the localized plane.
30. The method of claim 11, wherein the web defines a localized plane, and wherein the plurality of stems are oriented at an angle that is not normal to the localized plane, and further wherein the plurality of stems are angled in multiple directions.

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31. The method of claim 11, wherein forming a plurality of stems in each discrete polymeric region of the plurality of discrete polymeric regions comprises forcing the polymeric material of the plurality of polymeric regions against a tool comprising a plurality of angled holes, wherein the plurality of stems are oriented at an angle that is not normal to a localized plane defined by the web.

32. (ONCE AMENDED) A method of making a web construction comprising a plurality of stems distributed in discrete regions on the web construction, the method comprising:

providing a web construction comprising a continuous or substantially continuous layer of polymeric material on an elastic substrate, wherein the polymeric material is at a temperature above its softening point;

providing a tool comprising a plurality of stem-forming holes formed in a surface of the tool, wherein the plurality of stem-forming holes are arranged in a plurality of discrete regions on the surface of the tool;

pressing the layer of polymeric material against the surface of the tool, wherein a portion of the polymeric material enters the stem-forming holes; [and]

separating the layer of polymeric material from the surface of the tool, wherein a plurality of stems are distributed in a plurality of discrete regions on the web construction; and

stretching the elastic substrate after separating the layer of polymeric material from the surface of the tool, wherein the layer of polymeric material fractures.

33. (CANCELED)

34. (ONCE AMENDED) The method of claim 32, [wherein the web construction comprises an elastic substrate on which the layer of polymeric material is located, and wherein the method further comprises:] further comprising

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forming indentations in the layer of polymeric material between the plurality of discrete regions of stems [; and

stretching the elastic substrate after separating the layer of polymeric material from the surface of the tool], wherein the layer of polymeric material fractures along the indentations.

35. The method of claim 32, wherein the plurality of discrete regions of stem-forming holes are formed by masking a portion of the surface of the tool.

36. The method of claim 32, further comprising deforming of the plurality of stems with a heated surface to produce a disk-shaped end on the stems.

37. The method of claim 32, wherein between 5 and 25 percent of the surface of the tool is occupied by the plurality of discrete regions of stem-forming holes.

38. The method of claim 32, wherein the web construction defines a localized plane, and wherein the plurality of stems are oriented at an angle that is not normal to the localized plane.

39. The method of claim 32, wherein the web construction defines a localized plane, and wherein the plurality of stems are oriented at an angle that is not normal to the localized plane, and further wherein the plurality of stems are angled in multiple directions.

40. The method of claim 32, wherein the plurality of stem-forming holes are angled such that the plurality of stems are oriented at an angle that is not normal to a localized plane defined by the web construction.

41. (NEW) The method of claim 11, further comprising cooling the discrete quantities of the polymeric material to a non-molten state after forming the plurality of stems.

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42. (NEW) A method of making a web construction comprising a plurality of stems distributed in discrete regions on the web construction, the method comprising:
- providing a web construction comprising a web and a plurality discrete polymeric regions on a first major surface of the web, wherein each discrete polymeric region comprises a discrete quantity of polymeric material;
 - providing a tool comprising a plurality of stem-forming holes formed in a surface of the tool;
 - pressing each discrete polymeric region of the plurality of discrete polymeric regions on the first major surface of the web against the surface of the tool when the polymeric material of each discrete polymeric region is above its softening point, wherein a portion of the polymeric material enters the stem-forming holes; and
 - separating the web construction from the surface of the tool, wherein each discrete polymeric region comprises a plurality of stems formed by the stem-forming holes.
43. (NEW) The method according to claim 42, further comprising deforming the plurality of stems to produce an enlarged end on each stem of the plurality of stems.
44. (NEW) The method according to claim 42, wherein the plurality of discrete polymeric regions are located on only one major surface of the web.
45. (NEW) The method according to claim 42, wherein the plurality of discrete polymeric regions are separated by inter-regions revealing exposed portions of a first major surface of the web.
46. (NEW) The method according to claim 42, wherein the web comprises loop structures adapted to lock with the plurality of stems.
47. (NEW) The method according to claim 42, wherein the web comprises an elastic web.

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48. (NEW) The method according to claim 42, wherein the plurality of discrete polymeric regions comprises a plurality of stripes extending over the first major side of the web.
49. (NEW) The method according to claim 42, wherein each stem of the plurality of stems comprises a hook.
50. (NEW) A method of manufacturing a mechanical fastener, the method comprising:
providing at least one discrete quantity of polymeric material on a fibrous major surface of a nonwoven web, wherein the at least one discrete quantity of polymeric material forms at least one discrete polymeric region entangled with the fibrous major surface; and
forming a plurality of stems in the at least one discrete polymeric region.
51. (NEW) The method according to claim 50, further comprising simultaneously pressing the at least one discrete quantity of polymeric material against the fibrous major surface of the nonwoven web while forming the plurality of stems.
52. (NEW) The method according to claim 50, wherein the nonwoven web comprises a film layer.
53. (NEW) The method according to claim 52, wherein the film layer comprises an elastic film layer.
54. (NEW) The method according to claim 50, wherein the nonwoven comprises an elastic web.

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55. (NEW) The method according to claim 50, wherein the at least one discrete polymeric region is surrounded by the fibrous major surface of the nonwoven web.
56. (NEW) The method according to claim 50, wherein the at least one discrete polymeric region comprises a plurality of discrete patches on the fibrous major surface of the nonwoven web.
57. (NEW) The method according to claim 50, further comprising deforming the plurality of stems to produce an enlarged end on each stem of the plurality of stems.